



# UNITED STATES PATENT AND TRADEMARK OFFICE

EC

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,474	10/11/2001	Michael Guess	ONF100/4-CONUS	9742
23932	7590	07/21/2005	EXAMINER	
JENKENS & GILCHRIST, PC 1445 ROSS AVENUE SUITE 3200 DALLAS, TX 75202			KHOO, FOONG LIN	
			ART UNIT	PAPER NUMBER
			2664	

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/975,474	GUESS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	F. Lin Khoo	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 October 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/5/03 and 8/21/03</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: On page 9, line 3, feeder is labeled as number 20 but in Fig. 2 the feeder is labeled as number 10.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 3 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said master switch" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claims 3 and 12 recite the limitation "said VLAN utilizes Extreme Networks Standby Router Protocol" and applicant does not specify which version and date of the protocol that is utilized. Applicant is required to specify exactly the version and date of the protocol to provide clarification to the claimed invention.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 4, 5, 6, 7, 9, 10, 11, 13, 14, 15, 16, 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanekar et al. (U.S. Patent No. 6,751,191).

Regarding Claims 1 and 10, Kanekar et al. discloses a network failover transition system for a plurality of ports communicating over a VLAN (Fig. 5, col 7, lines 18-48 and Fig. 8, col 9, lines 24-65 ) comprising:

a first router (switch) having a master mode and a standby mode, and configured to provide switching between said ports while in said master mode (Fig. 5 and Fig. 6, col 8, lines 15-40. As disclosed, any one of the two routers can be designated to be a “master” (active) or “slave” (standby). Therefore, each router has both master and standby modes);

a second router (switch) having a master mode and a standby mode, and configured to provide switching between said ports while is said master mode, wherein said second router (switch) is in said standby mode when said first router (switch) is in said master

Art Unit: 2664

mode, and said second router (switch) is in said master mode when said first router (switch) is in said standby mode (Fig. 5 and Fig. 6, col 8, lines 15-40. As disclosed, any one of the two routers can be determined to be a "master" (active) or "slave" (standby).

Therefore, each router has both master and standby modes and when one is designated as master (actively forwarding packets), the other is considered as the slave which functions in standby mode);

wherein said master router (switch) is configured, upon a detection of a network failure, to restart auto-negotiation of said ports, and to transition to said standby mode; and

wherein said second router (switch) is configured, upon said detection of a network failure, to transition to said master mode (Fig. 12A and Fig. 12C, col 12, lines 6-67 and

col 13, lines 1-26. Upon failure of the master router, the slave router takes over as the master router and the master router transitions into the role of the slave (standby)

router. Auto-negotiation process starts upon failure of the master router thereby

initiating the slave router to modify its layer 2 table entries to replace references to the master with references to the slave such that each entry is mapped to the slave rather

than the master. Once the slave's layer 2 table has been modified, entries associated

with the master may be identified and removed from the layer 3 table so that the source of the packet is correctly identified in the packet header. In other words, the layer 3

shortcuts established by the master are purged from the layer 3 table. When an entry

for a particular flow is not in the layer 3 table, the packet is routed via a router

associated with that flow. More particularly, an entry in the layer 2 table (or a separate

mapping table) is matched with the destination MAC address as specified in the packet

header. In this manner, the outgoing VLAN and outgoing port for a specified destination MAC address may be obtained from information learned from previously received incoming packets).

Kanekar et al. discloses a method of failover transitioning a VLAN with a plurality of ports (Fig. 5, col 7, lines 18-48 and Fig. 8, col 9, lines 24-65) comprising:

- establishing a first router (switch) having a master mode and a standby mode as a master router (switch); configuring said master router (switch) to provide switching between said ports; (Fig. 5 and Fig. 6, col 8, lines 15-40. As disclosed, any one of the two routers can be designated as a "master" (active) or "slave" (standby). Therefore, each router has both master and standby modes);
- establishing a second router (switch) having a master mode and a standby mode as a standby switch (Fig. 5 and Fig. 6, col 8, lines 15-40. As disclosed, any one of the two routers can be determined to be a "master" (active) or "slave" (standby). Therefore, each router has both master and standby modes and when one is designated as master (actively forwarding packets), the other is considered as the slave which functions in standby mode);
- detecting a communication failure on said VLAN (col 7, lines 18-31 and Fig. 8, col 9, lines 49-65);
- restarting auto-negotiation of said ports with said master router (switch); transitioning said first router (switch) to standby mode, whereby said first router (switch) becomes said standby router (switch); and transitioning said second router (switch) to master

Art Unit: 2664

mode, whereby said second router (switch) becomes said master router (switch) (Fig. 12A and Fig. 12C, col 12, lines 6-67 and col 13, lines 1-26. Upon failure of the master router, the slave router takes over as the master router and the master router transitions into the role of the slave (standby) router. Auto-negotiation process starts upon failure of the master router thereby initiating the slave router to modify its layer 2 table entries to replace references to the master with references to the slave such that each entry is mapped to the slave rather than the master. Once the slave's layer 2 table has been modified, entries associated with the master may be identified and removed from the layer 3 table so that the source of the packet is correctly identified in the packet header. In other words, the layer 3 shortcuts established by the master are purged from the layer 3 table. When an entry for a particular flow is not in the layer 3 table, the packet is routed via a router associated with that flow. More particularly, an entry in the layer 2 table (or a separate mapping table) is matched with the destination MAC address as specified in the packet header. In this manner, the outgoing VLAN and outgoing port for a specified destination MAC address may be obtained from information learned from previously received incoming packets).

Regarding Claims 2 and 11, Kanekar et al. discloses wherein said VLAN is part of an Ethernet Network (col 8, lines 46-50 and Fig. 13A, col 14, lines 30-48. The MAC address indicated in Fig.13A is connected with a VLAN. MAC addressing scheme is associated with an Ethernet network).

Art Unit: 2664

Regarding Claims 4 and 13, Kanekar et al. discloses wherein said first and second routers (switches) are Layer 2 switches (col 2, lines 52-53).

Regarding Claims 5 and 14, Kanekar et al. discloses wherein said ports are Layer 3 devices (col 4, lines 8-11. It is disclosed that entries in the slave's layer 3 shortcut table are selected and removed gradually and that the entries may be removed according to port number or other criteria. Hence, ports can be associated with Layer 3 devices).

Regarding Claims 6 and 15, Kanekar et al. discloses wherein at least one of said ports utilizes Address Resolution Protocol (col 6, lines 30-39).

Regarding Claims 7 and 16, Kanekar et al. discloses wherein all of said ports utilize Address Resolution Protocol (col 6, lines 30-39, lines 47-50. Each router can be associated with more than one port (Fig. 3) and therefore have the ability to connect to multiple VLAN. The configuration as discussed indicates type of VLAN to which each port belongs is shown in Layer 2 Table (Fig. 13A). Hence, inherently all ports associated with the VLAN respond to ARP queries).

Regarding Claims 9 and 18, Kanekar et al. discloses wherein said network failure is detected using port track (Fig. 11A, col 10, lines 56-67 and col 11, lines 1-25. Port tracking is associated with a synchronization task that runs in master/slave mode and



Art Unit: 2664

the master sends to the slave synchronized state information to synchronize the port states and forward delay time. By way of example, the state of each port may indicate that the link is up or down, that the port is blocked, listening, or forwarding).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanekar et al. (U.S. Patent No. 6,751,191) in view of Extreme Networks, Inc.

Regarding Claims 3 and 12, Kanekar et al. fails to disclose wherein said VLAN utilizes Extreme Networks Standby Router Protocol. Extreme Networks, Inc. discloses the Extreme Networks Standby Router Protocol (ESRP) that allows multiple switches to provide redundant routing services to users (Chapter 10, Pages 10-1 to 10-20). Therefore, it would have been obvious to one skilled in the art to apply this protocol as taught by Extreme Networks, Inc. in the router used by Kanekar et al. to perform layer 2 redundancy in addition to layer 3 routing redundancy that can be used in combination or independently.

Art Unit: 2664

Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanekar et al. (U.S. Patent No. 6,751,191) in view of Coile et al (U.S. Patent No. 6,108,300).

Regarding Claim 8, Kanekar et al. fails to disclose wherein network failure is detected using ping track. Regarding Claim 17, Kanekar et al. fails to disclose wherein said detecting step comprises using ping track. Coile et al. discloses a ping test that counts all received packets for up to a predetermined amount of time and if any packets are received at any time during this interval the interface is considered operational and testing stops (Figure 6 (step 640), col 11, lines 10-18). Therefore, it would have been obvious to one skilled in the art to use the ping test as taught by Coile et al. in the failure detection mechanism of Kanekar et al. to check for connectivity and also provide a means for health check of the state of each port.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,835,696 to Hess provides a data router backup feature which allows each of the routers to be active at the same time while also providing a standby monitoring function for the other route(s).

U.S. Patent No. 6,088,328 to McKnight relates to a system and method for restoring failed communication services by providing a backup computing services using a heartbeat and challenge protocol to detect the failure.

U.S. Patent No. 6,826,158 to Seaman et al. relates to broadband communication services, and more particularly to network configuration of metropolitan area communication networks laid out in rings managed according to a spanning tree protocol.

U.S. Patent No. 6,834,056 to Hayes relates to VLANs used to segment the local ring networks, constructing a logical non-ring topology providing each device on the ring with alternative paths for communication.

Extreme Networks: "ExtremeWare Software User Guide", Software Version 6.1, April 2000, Pages 10-1 to 10-20.


The above prior arts are cited to further show the state of the art with respect to providing redundant services to users using relevant handover techniques in a communication network.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Lin Khoo whose telephone number is 571-272-5508. The examiner can normally be reached on flex time.

Art Unit: 2664

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



WELLINGTON CHIN  
SUPERVISORY PATENT EXAMINER